

## CONCEPT: EAS – MONOSUBSTITUTED BENZENE

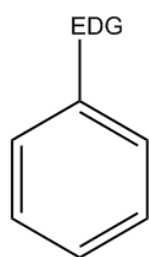
Substituents alter the electron density of benzene rings, affecting reactivity toward *subsequent* EAS in two ways:

### 1. Activity Effects

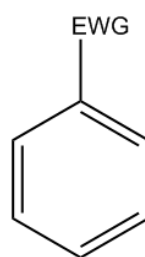
- Electron Donating Groups EDG's \_\_\_\_\_ the ring toward reactions
- Electron Withdrawing Groups EWG's \_\_\_\_\_ the ring toward reactions

### 2. Directing Effects

- Electron Donating Groups EDG's tend to be \_\_\_\_\_, \_\_\_\_\_ directors
- Electron Withdrawing Groups EWG's tend to be \_\_\_\_\_ directors

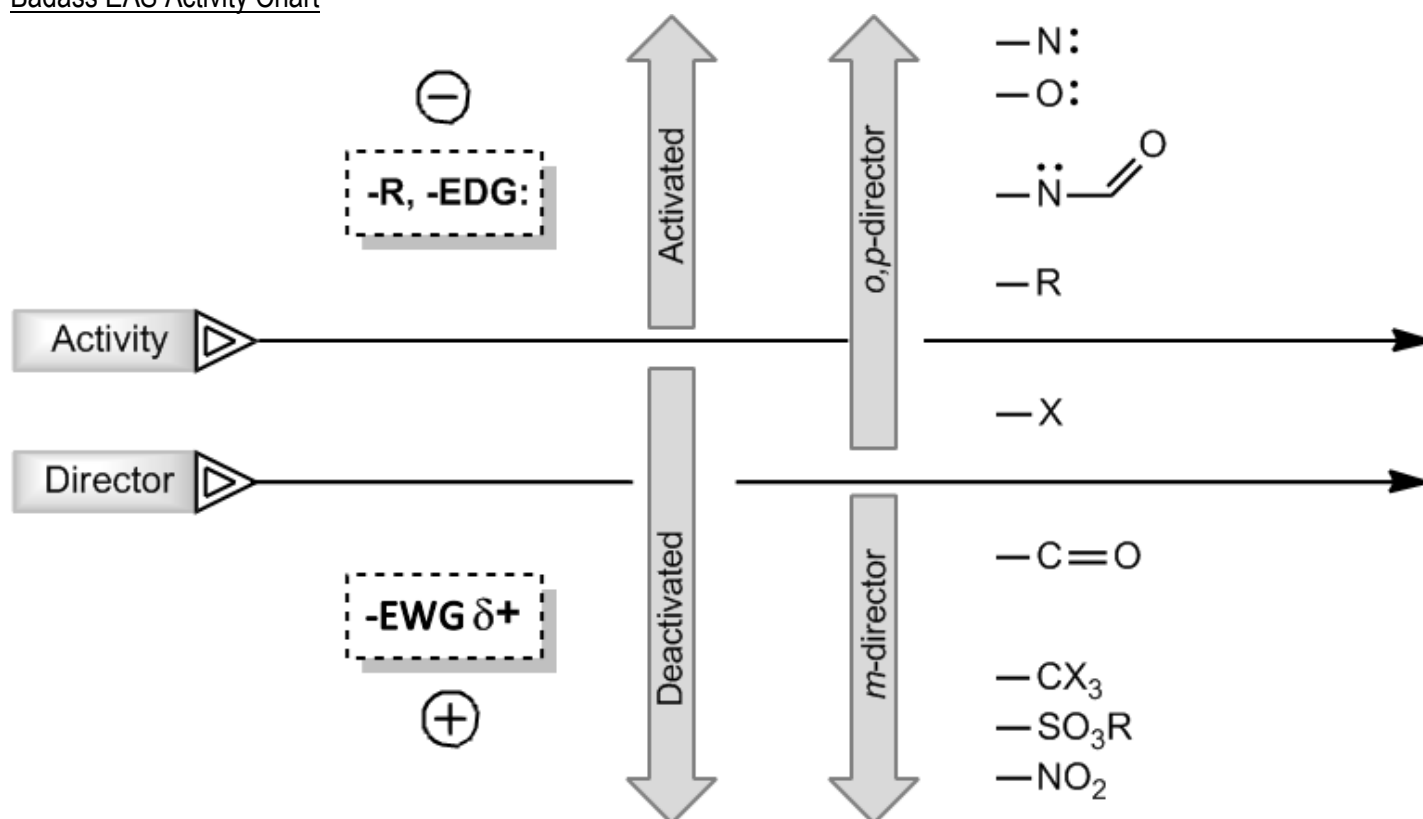


*o,p*-director

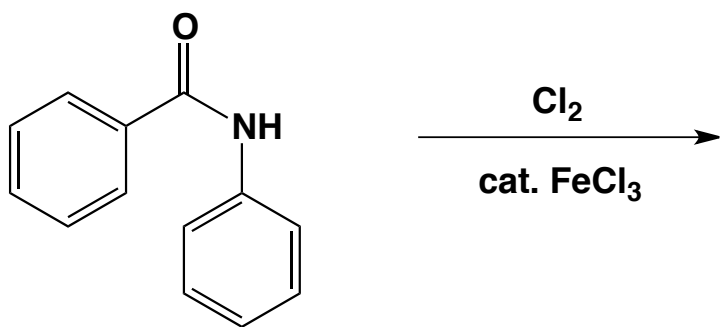


*m*-director

## Badass EAS Activity Chart



PRACTICE: Predict the major products of the following EAS reaction.



PRACTICE: Predict the product of the following multi-step synthesis.

